TEXAS INSTRUMENTS

Texas Instruments - ISSPLHAWK - DSP & ARM - Development Kit

Product Overview:

Hawk board is an open community board mainly designed to provide to the community a feature rich & economical solution based on Ti's OMAP L138 processor. With a wide range of peripheral support, this board is an ultimate tool for digital media & storage applications.

The OMAP L138 offers an integrated ARM9 and a Ti DSP. Its low power consumption level opens this system to a large range of Embedded & industrial applications. Internal Memory controller offers support for wide range of memories including DDR2/MDDR/SDRAM/NOR & NAND FLASH. Inbuilt SATA controller supporting SATA I & SATA II interfaces are available for extending the storage capacity of this platform. Inbuilt MMC/SD controller provides an instant add on storage for personal collections. UPP provides a high speed parallel interface to FPGAs & other data converters. Two USB ports provide wide variety of peripheral connectivity. The USB OTG port also provides an option to power the Hawk board when connected to a PC/LAPTOP.

Kit Contents:

This kit combines the

- Hawk Board OMAP L138 board

Key Features:

Processor

- Ti OMAP-L138 Low Power Application Processor
- 300-MHz ARM926EJ-STM RISC CPU
- 300-MHz C674x VLIW DSP
- On-Chip RTC

Memory

- 128 MByte DDR2 SDRAM running at 150MHz
- 128 MByte NAND FLASH
- 1 SD/MMC Slot

Interfaces

- One RS232 Serial Port
- One Fast Ethernet Port (10/100 Mbps)
- One USB Host port (USB 1.1)
- One USB OTG port (USB 2.0)
- One SATA Port (3Gbps)
- One VGA Port (15 pin D-SUB)
- Two AUDIO Ports (1 LINE IN & 1 LINE OUT)
- One Composite IN (RCA Jack)

Expansion Interface

- VPIF
- UPP
- PRU
- LCDC
- UART(x2)
- SPI (x2)
- I2C (x1)
- eCAP
- eHRPWM
- GPIO

Software Support

- U-Boot
- Linux BSP

Ordering Information:

Products:

Part Number	Manufacturer	Farnell P/N	Newark P/N
ISSPLHAWK	TI	1789013	65R5489

Associated Products:

Part Number	Manufacturer	Description	Farnell P/N	Newark P/N
TPS2087D	TI	Power Distribution Load Switch IC	1580102	77C0051
SN74AHC1G04DBVR	TI	Inverter Logic IC	1105916	76C1729
OMAPL138AZCE3	TI	32-bit Embedded Processor	1800133	64R0282
OMAPL138AZWT3	TI	32-bit Embedded Processor	1800134	64R0284
CDCM61001RHBT	TI	Clock Generation IC	NA	71P5315
SN74LVC2G34DBVR	TI	Gate / Inverter Logic IC	1470888RL	76C4213
SN74LVC1G11DBVR	TI	Gate / Inverter Logic IC	1607825RL	87H2655
SN74AVC16T245DGGR	TI	Transceiver Logic IC	1567121	21J8971

Similar Products:

Part Number	Manufacturer	Description	Support Device	Farnell P/N	Newark P/N
ISSPLHAWKLITE	Innovate Software Solutions	HAWK BOARD LITE	OMAPL138	1821223	NA
TMDSMEVM3530-L	TI	Development kits	OMAP35x	1784744	25R0024
TMDSEVM3530.	TI	Evaluation Module	OMAP35x	1780717	25R0023

Document List:

Datasheets:

Part Number	Description	Size
TPS2087	Power-Distribution Switches	1.07MB
SN74AHC1G04	Single Inverter Gate	461KB
OMAPL138	OMAP-L138 Low-Power Applications Processor	2.29MB
CDCM61001	Clock Generator	800KB
SN74LVC2G34	Dual Buffer Gate	743KB

| SN74LVC1G11 | Single 3-Input Positive-AND Gate | 624KB |
| SN74AVC16T245DGGR | Transceiver Logic IC | 559KB |

Application Notes:

File Name	Size
Simple Power Solution Using LDOs	143KB
High-Efficiency Power Solution Using DC/DC Converters With DVFS	160KB
USB 2.0 Board Design and Layout Guidelines	118KB
Understanding TI's PCB Routing Rule-Based DDR Timing Specification	93KB
OMAP-L1x/C674x/AM1x SOC Architecture and Throughput Overview	19KB
Medium Integrated Power Solution Using a Dual DC/DC Converter and an LDO	374KB
Sequencing OMAP-L138 with TPS65070	443KB

Hardware & Software:

File Name	Size
Schematic	548KB
PCB file	1.48MB
Bill of Material	36KB